IN THE CLAIMS:

Please further amend claims 9, 38, and 67 as shown below:

Claims 1-8 (canceled)

Claim 9 (currently amended): An optical communication device comprising:

a circuit board having a top surface and a bottom surface;

a bench mounted on the top surface of the circuit board;

a laser diode (LD) chip mounted on the bench for generating transmitting light signals;

a monitoring photodiode (PD) chip mounted on the bench for monitoring power of the laser diode;

light guides aligned with the laser diode on the bench for guiding light signals from the laser diode;

an LD-driving IC mounted upon the top surface of the circuit board for amplifying transmitting electric signals and giving amplified signal current to the laser diode (LD);

an auto power controlling (APC) IC mounted upon the bottom surface of the circuit board for controlling the power of the laser diode in accordance with the power sensed by the monitoring photodiode; and

electric elements mounted on the bottom surface of the circuit board, at least one of the electric elements being just below the bench,

wherein the light guide is an optical fiber with a ferrule,

wherein the bench has a larger V-groove for supporting the ferrule on a lower step, and a smaller V-groove for sustaining the fiber, and marks designating a spot of the laser diode (LD) for aligning the laser diode to the optical fiber, and

wherein one of the electric elements on the bottom or the APC IC is ~~just below the bench having the~~ mounted below and in opposition to the LD chip ~~and the PD chip~~ through the circuit board and the bench.

Claim 10 (previously presented): The optical communication device according to claim 9, wherein the bench has marks designating a spot of mounting the monitoring photodiode (PD).

Claim 11 (previously presented): The optical communication device according to claim 9, wherein the monitoring photodiode (PD) is a bottom incidence type PD and the monitoring photodiode (PD) and the laser diode (LD) are coupled by a groove.

Claim 12 (previously presented): The optical communication device according to claim 9, wherein the ferrule is capped with a receptacle for coupling to an external optical connector.

Claim 13 (previously presented): The optical communication device according to claim 9, wherein the bench is a single crystal silicon bench, and the larger V-groove and the smaller V-groove are made on the silicon bench by anisotropic chemical etching.

Claim 14 (previously presented): The optical communication device according to claim 9, wherein the electric elements mounted on the bottom surface of the circuit board are R/C elements which are either resistors or capacitors.

Claim 15 (original): The optical communication device according to claim 14, wherein the top surface of the circuit board has a set of outward extending leadpins which are connected to

wiring metallized patterns formed on the top surface and the bottom surface of the circuit board has another set of outward extending leadpins which are connected to wiring metallized patterns formed on the bottom surface.

Claim 16 (withdrawn): The optical communication device according to claim 1, wherein the optoelectronic elements on the bench include optoelectronic chips for generating light signals or for monitoring the generated light, a submount is laid upon the circuit board for supporting the light guide and the bench, and the bench aligns the light guide to the optoelectronic chip.

Claim 17 (withdrawn): The optical communication device according to claim 16, wherein the optoelectronic chips for generating light signals or for monitoring the generated light are one or two of a photodiode (PD), a laser diode (LD) and a light emitting diode (LED).

Claim 18 (withdrawn): The optical communication device according to claim 17, wherein the light guide is an optical fiber with a ferrule, the optical fiber is supported on the bench and the submount, and the ferrule is supported on the submount.

Claim 19 (withdrawn): The optical communication device according to claim 17, wherein the light guide is a waveguide made on the submount and the bench.

Claim 20 (withdrawn): The optical communication device according to claim 17, wherein the submount is a liquid crystal polymer and the bench is a single crystal silicon bench.

Claim 21 (withdrawn): The optical communication device according to claim 17, wherein the submount is a liquid crystal polymer and the bench is a ceramic bench.

Claim 22 (withdrawn): The optical communication device according to claim 17, wherein the optoelectronic chips on the chip are a laser diode (LD) for generating transmitting light signals and a monitoring photodiode (PD) for monitoring power of the laser diode, the electronic element laid upon the top surface of the circuit board is an LD-driving IC for amplifying transmitting electric signals and giving the amplified signal current to the laser diode(LD), and the electronic elements mounted upon the bottom surface of the circuit board are an auto power controlling (APC) IC for controlling the power of the laser diode in accordance with the power sensed by the monitoring photodiode.

Claim 23 (withdrawn): The optical communication device according to claim 20, wherein the light guide is an optical fiber with a ferrule, the silicon bench has a narrow V-groove for supporting an end of the fiber, the submount has a smaller V-groove for supporting the fiber and a larger V-groove for sustaining the ferrule on a lower step, and marks of designating a spot of the laser diode (LD) for aligning the laser diode to the optical fiber.

Claim 24 (withdrawn): The optical communication device according to claim 23, wherein the bench has marks of designating a spot of mounting the monitoring photodiode (PD).

Claim 25 (withdrawn): The optical communication device according to claim 24, wherein the monitoring photodiode (PD) is a bottom incidence type PD and the monitoring photodiode (PD) and the laser diode (LD) are coupled by a groove.

Claim 26 (withdrawn): The optical communication device according to claim 25, wherein the ferrule is capped with a receptacle for coupling to an external optical connector.

Claim 27 (withdrawn): The optical communication device according to claim 26, wherein the bench is a single crystal silicon bench, the narrow V-groove on the bench is made by anisotropic chemical etching.

Claim 28 (withdrawn): The optical communication device according to claim 27, wherein the 10 electric elements mounted on the bottom surface of the circuit board are R/C elements which are either resistors or capacitors.

Claim 29 (withdrawn): The optical communication device according to claim 28, . wherein the top surface of the submount has a set of outward extending leadpins which are connected to wiring metallized patterns formed on the top surface of the submount and the bottom surface of the circuit board has another set of outward extending leadpins which are connected to wiring metallized patterns formed on the bottom surface.

Claim 30 (withdrawn): The optical communication device according to claim 28, wherein the top surface of the circuit board has another set of outward extending leadpins which are connected to wiring metallized patterns formed on the top surface of the circuit board.

Claim 31-37 (canceled)

Claim 38 (currently amended): An optical communication device comprising:

a circuit board having a top surface and a bottom surface;

a bench mounted on the top surface of the circuit board;

a photodiode (PD) chip mounted on the bench for receiving light signals;

light guides aligned with the photodiode on the bench for guiding the receiving signals to the photodiode;

a preamplifier-IC mounted upon the top surface of the circuit board for preamplifying the signals of the photodiode;

at least one of a waveform-reforming IC, a timing-adjusting IC, and a buffer IC mounted upon the bottom surface of the circuit board; and

electric elements mounted on the bottom surface of the circuit board, ~~at least one of the electric elements being just below the bench,~~

wherein the light guide is an optical fiber with a ferrule,

wherein the bench has a larger V- groove for supporting the ferrule on a lower step, a smaller V-groove for sustaining the fiber, and marks designating a spot of the photodiode (PD) for aligning the photodiode to the optical fiber, and

wherein one of the electric elements on the bottom, the waveform reforming IC, the timing-adjusting IC or the buffer IC is ~~just~~ mounted below ~~the bench having~~ and in opposition to the PD chip through the circuit board and the bench.

Claim 39 (previously presented): The optical communication device according to claim 38, wherein the bench has marks designating a spot of mounting the preamplifier IC.

Claim 40 (previously presented): The optical communication device according to claim 38, wherein the photodiode (PD) is a bottom incidence type PD and the photodiode (PD) is coupled to the optical fiber by the smaller V-groove with a reflection plane.

Claim 41 (previously presented): The optical communication device according to claim 38, wherein the ferrule is capped with a receptacle for coupling to an external optical connector.

Claim 42 (previously presented): The optical communication device according to claim 38, wherein the bench is a single crystal silicon bench, and the larger V-groove and the smaller V-groove are made on the silicon bench by anisotropic chemical etching.

Claim 43 (previously presented): The optical communication device according to claim 38, wherein the electric elements mounted on the bottom surface of the circuit board are R/C elements which are either resistors or capacitors.

Claim 44 (withdrawn): The optical communication device according to claim 43, wherein the top surface of the circuit board has a set of outward extending leadpins which are connected to wiring metallized patterns formed on the top surface, and the bottom surface of the circuit board has another set of outward extending leadpins which are connected to wiring metallized patterns formed on the bottom surface.

Claim 45 (withdrawn): The optical communication device according to claim 1, wherein a submount is laid upon the circuit board for supporting the light guide and the bench, the optoelectronic elements on the bench include an optoelectronic chip for receiving light signals,

the bench aligns the light guide to the optoelectronic chip, and an IC preamplifies signal of the optoelectronic chip.

Claim 46 (withdrawn): The optical communication device according to claim 45, wherein the optoelectronic chip is a photodiode (PD) and the IC is a preamplifier IC for preamplifying the signal of the photodiode chip.

Claim 47 (withdrawn): The optical communication device according to claim 46, wherein the light guide is an optical fiber supported on the bench and the submount and a ferrule supported on the submount.

Claim 48 (withdrawn): The optical communication device according to claim 46, wherein the light guide is a waveguide made on the bench and the submount.

Claim 49 (withdrawn): The optical communication device according to claim 46, wherein the bench is a single crystal silicon bench and the submount is made of a liquid crystal polymer.

Claim 50 (withdrawn): The optical communication device according to claim 46, wherein the bench is a ceramic bench and the submount is made of a liquid crystal polymer.

Claim 51 (withdrawn): The optical communication device according to claim 46, wherein the electronic element laid upon the top surface of the circuit board is a main amplifier for amplifying preamplified current of the preamplifier IC, and the electronic elements mounted

upon the bottom surface of the circuit board are one or more than one of a waveform-reforming IC, a timing-adjusting IC and a buffer IC.

Claim 52 (withdrawn): The optical communication device according to claim 51, wherein the light guide is an optical fiber with a ferrule, the submount has a larger V-groove for supporting the ferrule on a lower step and a smaller V-groove for sustaining the fiber, the bench has a narrow V-groove for supporting an end of the fiber and marks of designating a spot of the photodiode (PD) for aligning the photodiode to the optical fiber.

Claim 53 (withdrawn): The optical communication device according to claim 52, wherein the 25 bench has marks of designating a spot of mounting the preamplifier IC.

Claim 54 (withdrawn): The optical communication device according to claim 53, wherein the photodiode (PD) is a bottom incidence type PD and the photodiode (PD) is coupled to the optical fiber by the narrow groove with a reflection plane.

Claim 55 (withdrawn): The optical communication device according to claim 54, wherein the ferrule is capped with a receptacle for coupling to an external optical connector.

Claim 56 (withdrawn): The optical communication device according to claim 55, wherein the bench is a single crystal silicon bench and the narrow V-groove on the bench is made by anisotropic chemical etching.

Claim 57 (withdrawn): The optical communication device according to claim 56, wherein the electric elements mounted on the bottom surface of the circuit board are R/C elements which are either resistors or capacitors.

Claim 58 (withdrawn): The optical communication device according to claim 57, wherein the top surface of the submount has a set of outward extending leadpins which are connected to wiring metallized patterns formed on the top surface of the submount and the bottom surface of the circuit board has another set of outward extending leadpins which are connected to wiring metallized patterns formed on the bottom surface.

Claim 59 (withdrawn): The optical communication device according to claim 58, wherein the top surface of the circuit board has another set of outward extending leadpins which are connected to wiring metallized patterns formed on the top surface.

Claim 60-66 (canceled)

Claims 67 (currently amended): An optical communication device comprising:

an LD module;

a PD module;

a package encasing a pair of the LD module and the PD module;

the LD module including:

a first circuit board with a top surface and a bottom surface;

an LD driving IC mounted upon the top surface of the first circuit board;

an auto power controlling (APC) IC mounted upon the bottom surface of the first circuit board;

a first silicon bench fitted upon the top surface of the first circuit board;

an LD chip and a monitoring PD chip mounted on the first silicon bench;

an end of an optical fiber sustained by the silicon bench; and

a ferrule incasing another end of the fiber and being retained by the first silicon bench, the PD module comprising;

a second circuit board with a top surface and a bottom surface;

a first group of ICs mounted upon the top surface of the second circuit board;

a second group of ICs mounted on the bottom surface of the second circuit board;

a second silicon bench fitted upon the top surface of the second circuit board;

a PD chip mounted upon the second silicon bench for sensing light signals and generating photocurrent;

a preamplifier IC chip mounted upon the second silicon bench for preamplifying the photocurrent of the PD chip;

an optical fiber with an end sustained by the second silicon bench for guiding light signals to the PD chip; and

a ferrule incasing the other end of the fiber and being retained by the second silicon bench[[.]]

wherein the auto power controlling (APC) IC is mounted on the first circuit board below and in opposition to the LD chip through the first circuit board and the first silicon bench, and

wherein at least one IC of the second group of IC's is mounted on the second circuit board below and in opposition to the PD chip through the second circuit board and the second silicon bench.

Claim 68 (original): The optical communication device according to claim 67, wherein the first group of ICs mounted on the top surface of the second circuit board is a main amplifier IC for amplifying the preamplified current.

Claim 69 (original): The optical communication device according to claim 68, wherein the second group of ICs mounted on the bottom surface of the second circuit board are a waveform-reforming IC, a timing-adjusting IC and a buffer IC.